



United States Department of Agriculture  
Forest Service

# **Vol I - Final Environmental Impact Statement**

## **Revised Land and Resource Management Plan**

### **Lake Tahoe Basin Management Unit**

Pacific  
Southwest  
Region  
R5-MB-254A  
November 2013

**Non-Discrimination Policy**

The U.S. Department of Agriculture (USDA) prohibits discrimination against its customers, employees, and applicants for employment on the bases of race, color, national origin, age, disability, sex, gender identity, religion, reprisal, and where applicable, political beliefs, marital status, familial or parental status, sexual orientation, or all or part of an individual's income is derived from any public assistance program, or protected genetic information in employment or in any program or activity conducted or funded by the Department. (Not all prohibited bases will apply to all programs and/or employment activities.)

**To File an Employment Complaint**

If you wish to file an employment complaint, you must contact your agency's EEO Counselor (PDF) within 45 days of the date of the alleged discriminatory act, event, or in the case of a personnel action. Additional information can be found online at: [www.ascr.usda.gov/complaint\\_filing\\_file.html](http://www.ascr.usda.gov/complaint_filing_file.html).

**To File a Program Complaint**

If you wish to file a Civil Rights program complaint of discrimination, complete the USDA Program Discrimination Complaint Form (PDF), found online at [www.ascr.usda.gov/complaint\\_filing\\_cust.html](http://www.ascr.usda.gov/complaint_filing_cust.html), or at any USDA office, or call (866) 632-9992 to request the form. You may also write a letter containing all of the information requested in the form. Send your completed complaint form or letter to us by mail at U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, by fax (202) 690-7442 or email at [program.intake@usda.gov](mailto:program.intake@usda.gov).

**Persons with Disabilities**

Individuals who are deaf, hard of hearing or have speech disabilities and you wish to file either an EEO or program complaint please contact USDA through the Federal Relay Service at (800) 877-8339 or (800) 845-6136 (in Spanish).

Persons with disabilities who wish to file a program complaint, please see information above on how to contact us by mail directly or by email. If you require alternative means of communication for program information (e.g., Braille, large print, audiotape, etc.)

please contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

**Cover photo:**

View of Fallen Leaf Lake with Mt. Tallac in the background, approximately one mile south of the city of South Lake Tahoe.

**Credit – all photos, graphs and maps:**

U.S. Forest Service staff, Lake Tahoe Basin Management Unit  
*may be duplicated for public use (not for profit)*

**Lake Tahoe Basin Management Unit  
Revised Land and Resource Management Plan  
Final Environmental Impact Statement**

**November 2013**

**Alpine, El Dorado, and Placer Counties, California  
and  
Douglas and Washoe Counties, and Carson City, Nevada**

<b>Responsible Agency:</b>	USDA Forest Service
<b>Responsible Official:</b>	Randy Moore Regional Forester Pacific Southwest Region. 1323 Club Drive Vallejo, CA 94592 (707) 562-9000
<b>For more information contact:</b>	Theresa Corless Regional Appeals Coordinator Pacific Southwest Region. 1323 Club Drive Vallejo, CA 94592 (707) 562-8768

This Proposed Land and Resource Management Plan (Forest Plan) describes the framework that will guide on-the-ground projects and program activities.

Public notification for commencement of the 60-day objection period has been published in the Federal Register and Sacramento Bee newspaper.

A copy of the notice may be accessed from the LTBMU Forest Plan Revision website at:  
<http://www.fs.usda.gov/goto/lbmu/ForestPlanRevision>

**ABSTRACT:**

The Forest Service proposes to revise the 1988 Land and Resource Management Plan (Forest Plan) for the Lake Tahoe Basin Management Unit (LTBMU). Plan revision would provide an updated Forest Plan for the Lake Tahoe Basin Management Unit (LTBMU) that would guide management of National Forest System (NFS) lands in the Lake Tahoe Basin for approximately the next 15 years.

- The proposal updates the management direction for approximately 154,000 acres of NFS lands in California and Nevada by describing desired conditions, objectives, suitable uses, standards and guidelines and monitoring requirements.
- In accordance with the National Environmental Policy Act of 1969, the Forest Service provided opportunity for the public to comment on a Draft Environmental Impact Statement (DEIS) for the Draft Forest Plan.
- Comments have been responded to in this Final Environmental Impact Statement (FEIS) which analyzes the consequences of five alternatives including a “no action” alternative which would continue management under the 1988 Forest Plan, as amended.
- Alternative E (which was added as a result of comments on the DEIS) is the Agency’s Preferred Alternative and is fully embodied in the Draft Forest Plan.

**CITATION:**

USDA Forest Service LTBMU. 2013. Final Revised Land and Resource Management Plan Final EIS. R5-MB-254A. U.S. Forest Service, Lake Tahoe Basin Management Unit. CA: South Lake Tahoe.

# FEIS Table of Contents

Executive Summary.....	ES-1
Introduction.....	ES-1
<i>Abstract</i> .....	ES-1
<i>Decision to Be Made</i> .....	ES-1
<i>The Planning Process</i> .....	ES-1
The Final Environmental Impact Statement.....	ES-2
<i>Issues</i> .....	ES-2
<i>Alternatives</i> .....	ES-4
<i>Environmental Consequences</i> .....	ES-9
Chapter 1 – Purpose and Need for the Revised Forest Plan .....	1-1
1.1 Introduction .....	1-1
1.2 Changes between DEIS and FEIS.....	1-2
1.3 Plan Area .....	1-3
1.4 Applicable Planning Regulations.....	1-5
1.5 Purpose and Need for Forest Plan Revision .....	1-5
1.6 Decision Framework.....	1-6
1.7 Plan Content.....	1-9
1.8 How the Management Direction Is Applied .....	1-11
1.9 The Role of Science in Environmental Analysis.....	1-11
1.10 Summary of Public Involvement, Scoping, & Collaboration .....	1-12
1.11 Plan Revision Issues.....	1-13
1.12 Laws, Regulations and Policies .....	1-19
Chapter 2 – Alternatives, Including the Proposed Action.....	2-1
2.1. Development of Alternatives.....	2-1
2.2. Elements Common to All Alternatives.....	2-3
2.3. Alternatives Considered in Detail.....	2-4
2.3.1. <i>Alternative A: No Action (1988 Plan, as amended)</i> .....	2-5
2.3.2. <i>Alternative B: DEIS Preferred Alternative</i> .....	2-7
2.3.3. <i>Alternative C</i> .....	2-10
2.3.4. <i>Alternative D</i> .....	2-11
2.3.5. <i>Alternative E: FEIS Preferred Alternative</i> .....	2-13
2.4. How the Alternatives Address Relevant Issues .....	2-14
2.4.1. <i>Watershed Health and Aquatic Ecosystems</i> .....	2-14
2.4.2. <i>Terrestrial Ecosystems</i> .....	2-15
2.4.3. <i>Recreation</i> .....	2-16
2.4.4. <i>Access and Travel Management</i> .....	2-17
2.5. Alternatives Considered but Eliminated from Detailed Study.....	2-19
2.5.1. <i>Conduct Revision as Part of a Sierra Nevada Ecoregion Plan</i> .....	2-19
2.5.2. <i>Recommend Additional Wild and Scenic Rivers</i> .....	2-19
2.5.3. <i>Revise the Over-Snow Vehicle Use Designations</i> .....	2-20
2.5.4. <i>Increase the Pace and Scale of Ecosystem Restoration</i> .....	2-22
2.5.5. <i>Citizen's Inventoried Roadless Areas</i> .....	2-23
2.5.6. <i>No Grazing Alternative</i> .....	2-23
2.5.7. <i>2001 SNFPA Alternative</i> .....	2-24
2.5.8. <i>Consider the Document "National Forests in the Sierra Nevada: A Conservation Strategy" As an Alternative</i> .....	2-27
2.6. Comparison of Alternatives.....	2-28
2.6.1. <i>How Plan Decisions Change by Alternative</i> .....	2-28
2.6.2. <i>Comparison Tables</i> .....	2-33

<b>Chapter 3 – Affected Environment and Environmental Consequences.....</b>	<b>3-1</b>
<b>3.1. Introduction.....</b>	<b>3-1</b>
<b>3.2. Organization of the Analysis .....</b>	<b>3-1</b>
3.2.1. <i>Introduction and Scope of the Analysis .....</i>	<i>3-3</i>
3.2.2. <i>Methodology .....</i>	<i>3-3</i>
3.2.3. <i>Assumptions .....</i>	<i>3-3</i>
3.2.4. <i>Overview of the Affected Environment .....</i>	<i>3-3</i>
3.2.5. <i>Environmental Consequences .....</i>	<i>3-4</i>
3.2.6. <i>Analytical Conclusions.....</i>	<i>3-4</i>
<b>3.3. Assumptions Common to All Alternatives .....</b>	<b>3-10</b>
3.3.1. <i>Recreation Expansion under All Analysis .....</i>	<i>3-12</i>
<b>3.4. Affected Environment and Environmental Consequences by Resource Area .....</b>	<b>3-13</b>
3.4.1. <i>Access and Travel Management.....</i>	<i>3-13</i>
3.4.2. <i>Air Quality .....</i>	<i>3-28</i>
3.4.3. <i>Aquatic Wildlife Habitat and Species .....</i>	<i>3-78</i>
3.4.4. <i>Botanical Habitat and Species. ....</i>	<i>3-122</i>
3.4.5. <i>Terrestrial Invasive Species. ....</i>	<i>3-153</i>
3.4.6. <i>Built Environment .....</i>	<i>3-166</i>
3.4.7. <i>Climate Change .....</i>	<i>3-173</i>
3.4.8. <i>Cultural Resources. ....</i>	<i>3-192</i>
3.4.9. <i>Tribal Relations .....</i>	<i>3-195</i>
3.4.10. <i>Fire and Fuels .....</i>	<i>3-198</i>
3.4.11. <i>Forest Vegetation .....</i>	<i>3-237</i>
3.4.12. <i>Interpretive and Education, Partnerships and Volunteers .....</i>	<i>3-290</i>
3.4.13. <i>Lands Program .....</i>	<i>3-295</i>
3.4.14. <i>Management Indicator Species (MIS).....</i>	<i>3-306</i>
3.4.15. <i>Minerals.....</i>	<i>3-356</i>
3.4.16. <i>Natural Hazards .....</i>	<i>3-360</i>
3.4.17. <i>Noise. ....</i>	<i>3-363</i>
3.4.18. <i>Range Resources. ....</i>	<i>3-370</i>
3.4.19. <i>Recreation.....</i>	<i>3-375</i>
3.4.20. <i>Scenic Resources.....</i>	<i>3-427</i>
3.4.21. <i>Social and Economic Conditions. ....</i>	<i>3-444</i>
3.4.22. <i>Soils Resource. ....</i>	<i>3-455</i>
3.4.23. <i>Terrestrial Wildlife Habitat and Species .....</i>	<i>3-470</i>
3.4.24. <i>Water Quality and Soil Erosion. ....</i>	<i>3-533</i>
3.4.25. <i>Water Quantity.....</i>	<i>3-553</i>
3.4.26. <i>Watershed Condition.....</i>	<i>3-558</i>
3.4.27. <i>Wilderness .....</i>	<i>3-569</i>
<b>3.5. Cumulative Environmental Consequences .....</b>	<b>3-579</b>
3.5.1. <i>Non-Forest Service Lands. ....</i>	<i>3-580</i>
3.5.2. <i>Cumulative Effects by Resource Area.....</i>	<i>3-581</i>
<b>3.6. Environmental Justice.....</b>	<b>3-600</b>
<b>3.7. Relationship of Short-Term Uses and Long-Term Productivity.....</b>	<b>3-600</b>
<b>3.8. Unavoidable Adverse Impacts .....</b>	<b>3-601</b>
<b>3.9. Irreversible and Irrecoverable Commitment of Resources.....</b>	<b>3-601</b>

<b>Chapter 4 – Consultation and Coordination</b> .....	<b>4-1</b>
<b>4.1. Preparers and Contributors</b> .....	<b>4-2</b>
<i>Interdisciplinary Team Members – USDA Forest Service</i> .....	4-2
<i>List of Preparers</i> .....	4-7
<b>4.2. Consultation</b> .....	<b>4-10</b>
<b>4.3. Distribution</b> .....	<b>4-11</b>
<i>Notification of DEIS release to Individuals &amp; Organizations</i> .....	4-11
<i>Distribution of FEIS to Additional Agencies and Community Locations</i> .....	4-14
<b>Index of FEIS Topics</b> .....	<b>I-1</b>

**FEIS Maps**

FEIS Map 1. Management Areas – Alts. A and B	
FEIS Map 2. Management Areas – Alt. C	
FEIS Map 3. Management Areas – Alt. D	
FEIS Map 4. Wildland Urban Interface (WUI) Zones – Alts. A, B and C	
FEIS Map 5. Wildland Urban Interface (WUI) Zones – Alt. D	
FEIS Map 6. Existing Developed & Permitted Recreation Sites	
FEIS Map 7. Existing Developed & Permitted Recreation Sites – Inset	
FEIS Map 8. Recreation Residence Tracts	
FEIS Map 9. Condition Class Mean Fire Return Interval (FRI)	
FEIS Map 10. Changes in Recreation Opportunities – Alt. D	
FEIS Map 11. PAC and HRCA Alts. A, B, C and D	
FEIS Map 12. Old Forest Emphasis Areas (OFEA) and Critical Aquatic Refuges (CAR)	
FEIS Map 13. Species Refuge Areas (Biological) – Alts. B, C and D	
FEIS Map 14. Whitebark Pine Species Refuge Area	
FEIS Map 15. Management Areas – Alternative E	
FEIS Map 16. Stanford Rock Backcountry Management Area	

**List of Table and Figures**

**FEIS Tables**

Table ES-1. Major program strategies by alternative.....	ES-6
Table 1-1. Changes to developed recreation baseline between DEIS and FEIS.....	1-3
Table 2-1. Summary of Key Strategic Differences among Alternatives.....	2-34
Table 2-2 Comparison of Alternatives by Management Area.....	2-43
Table 2-3 Comparison of Alternatives by Environmental Consequences on Resources.....	2-45
Table 3-1. Ongoing Activities and Uses.....	3-4
Table 3-2. LTBMU Road System Description, by Maintenance Level.....	3-14
Table 3-3. LTBMU Trail System Description by Managed Use.....	3-15
Table 3-4. Miles of road by jurisdiction in the LTBMU Administrative Boundary.....	3-15
Table 3-5. Summary of Air Quality Issues and Indicators.....	3-31
Table 3-6. National and State Ambient Air Quality Standards (µg m-3 (ppm)).....	3-37
Table 3-7. Wildland fire acres in the Lake Tahoe Basin from 2001 to 2010.....	3-40
Table 3-8. 2010 Estimated annual average emissions (tons/day) for natural sources (including wildfire).....	3-42
Table 3-9. Average concentration of NH3, HNO3, and O3 for 2002, 2006, and 2010.....	3-43
Table 3-10. LTBMU acreages by Watershed Assessment Units (HUC6) and condition for grouping for N deposition.....	3-45
Table 3-11. Baseline (2000-2004) vs. 2005-2009 data from the Bliss IMPROVE site showing the trend for worst visibility days.....	3-51
Table 3-12. Baseline (2000-2004) vs. 2005-2009 data from the Bliss IMPROVE site showing the trend for the best visibility days.....	3-52

Table 3-13. Best and worst deciviews for the glide path.....	3-54
Table 3-14. Pollutant emissions from prescribed fire for Period 1 (tons) .....	3-57
Table 3-15. Pollutant emissions from wildfire for Period 1 (tons) .....	3-58
Table 3-16. Total pollutant emissions (prescribed and wildfire) for Period 1 (tons).....	3-59
Table 3-17. Emissions from Snowmobiles (tons/yr) .....	3-64
Table 3-18. Pollutant emissions averted by harvest for Period 1 (tons) .....	3-65
Table 3-19. Air toxic emissions averted by harvest for Period 1 (tons of CO2 equivalent).....	3-67
Table 3-20. Air Quality Impact summary.....	3-77
Table 3-21. Biological Resource Groups and Emphasis.....	3-99
Table 3-22. Comparison of Consequences by Alternative, Aquatic Wildlife.....	3-119
Table 3-23. Plant species analyzed in the revised Forest Plan FEIS.....	3-123
Table 3-24 Management Status and Rarity of TEPCS Species.....	3-131
Table 3-25. Range of estimated whitebark pine abundance on LTBMU.....	3-134
Table 3-26. Comparison of Consequences by Alternative, Threatened or Endangered Plant Species.....	3-149
Table 3-27. Acreage, quantity, and relative percentages of known mapped invasive plants infestations.....	3-156
Table 3-28. Infestations on Non-NFS lands within the Lake Tahoe Basin.....	3-157
Table 3-29. Climate change adaptation and mitigation strategies numerical ranking.....	3-189
Table 3-30. Mean (range) surface fuel characteristics estimated for reference (Ref.) and contemporary (Con.) forests in the Lake Tahoe Basin, USA.....	3-211
Table 3-31. Mean (range) canopy fuel characteristics for reference and contemporary forests in the Lake Tahoe Basin.....	3-212
Table 3-32. Weather recorded on days when large fire occurred in Lake Tahoe Basin.....	3-214
Table 3-33. Number of ignitions and acres burned by cause (human versus natural) over the last three decades.....	3-215
Table 3-34. Average annual lightning strike occurrence by area approved for managed wildfire by alternative, and estimated ignitions calculated from regression equation.....	3-221
Table 3-35. Acre contributions to effects on indicator by the various vegetation and fuels treatments.....	3-226
Table 3-36. Acre contributions to effects on indicator 2 by prescribed fire and managed wildfire.....	3-230
Table 3-37. Seral stages by canopy and tree sizes.....	3-240
Table 3-38. Current Status and Trend of Indicators without treatment and forest restoration goals in the Lake Tahoe Basin.....	3-246
Table 3-39. Annual Aerial Tree Mortality Survey for the Years 2000 to 2011.....	3-248
Table 3-40. Modeled Pre-Settlement Historical Reference Conditions.....	3-251
Table 3-41. Desired range of stocking (density) and basal area of live trees and number of snags and tons per acre of coarse woody debris on the forest floor.....	3-252
Table 3-42. Current Forest Conditions by California Wildlife Habitat Relationship Class and Seral Stage based on Forest Inventory.....	3-253
Table 3-43. Summary of all forest type trend changes from current conditions over a prediction of five decades.....	3-256
Table 3-44. Summary of white fir/mixed conifer trend changes from current conditions over a prediction of five decades.....	3-256
Table 3-45. Summary of Jeffrey pine trend changes from current conditions over a prediction of five decades.....	3-257
Table 3-46. Summary of Red fir trend changes from current conditions over a prediction of five decades.....	3-257

Table 3-47. Relative Comparison of the Positive Effects of Each Alternative to Achieving Desired Conditions.....	3-288
Table 3-48. Special Use Permits issued by the LTBMU, as of 12/9/2011.....	3-300
Table 3-49. Management Indicator Species (MIS) components for the Lake Tahoe Basin Management Unit.....	3-309
Table 3-50. Number of surveyed fires with Black-backed Woodpecker detections, points surveyed.....	3-332
Table 3-51. Estimated geologic hazards, consequences and risks within the LTBMU.....	3-361
Table 3-52. Range Resources Impact Summary.....	3-374
Table 3-53. National Forest Visits to the LTBMU.....	3-380
Table 3-54. 2010 Recreation Activity Participation on LTBMU.....	3-381
Table 3-55. NVUM overall satisfaction ratings 2005 and 2010.....	3-382
Table 3-56. Recreation Opportunity Spectrum (ROS) Classification for NFS lands in the Lake Tahoe Basin (2011).....	3-383
Table 3-57. Inventory of Developed Recreation Sites.....	3-389
Table 3-58. Management Areas Comparison to Recreation Opportunity Spectrum.....	3-395
Table 3-59. Recreation Opportunity Spectrum (ROS) Classification by Alternative.....	3-397
Table 3-60. Maximum ski area operational footprint acreage on NFS lands in Lake Tahoe Basin.....	3-418
Table 3-61. Existing Scenic Integrity Inventory, NFS Acres & Percent of Total Area.....	3-430
Table 3-62 Existing Scenic Stability — NFS Acres and Percent of Total Area.....	3-431
Table 3-63. Comparison of Consequences to Scenic Integrity by Alternative.....	3-440
Table 3-64. Minimum Scenic Integrity Objective, by Acres and Alternative .....	3-442
Table 3-65. Annual Visitation Estimate.....	3-447
Table 3-66. Activity Participation on LTBMU.....	3-447
Table 3-67. Trip Spending and Lodging Usage.....	3-449
Table 3-68. LTBMU Economic Contribution to Lake Tahoe Region (2008) .....	3-450
Table 3-69. Employment by Program Area for the Lake Tahoe Region.....	3-451
Table 3-70. LTBMU Environmental Improvement Program (EIP) and the Lake Tahoe Restoration Act (LTRA Program Funding by Fiscal Year) .....	3-452
Table 3-71. LTBMU Program Funding Provided by the Southern Nevada Public Lands Management Act (SNPLMA) .....	3-453
Table 3-72. Summary of Alternatives by Economic Alternative.....	3-454
Table 3-73. Employment (for the Lake Tahoe Region as defined by zip codes) – total number of jobs contributed.....	3-454
Table 3-74. Comparison of Consequences to the Soil Resource.....	3-468
Table 3-75. Special-status species for the LTBMU, listing status, habitat, and potential for occurrence in the LTBMU during the life of the Plan.....	3-471
Table 3-76 SPECTRUM model predicted changes in late seral closed canopy CWHR classes 5M, 5D, and 6 for the five Alternatives.....	3-511
Table 3-77. SPECTRUM model predicted changes in mid seral closed canopy CWHR classes 3M, 3D, 4M, and 4D for the five Alternatives.....	3-512
Table 3-78. Listed 303(d) stream segments in the Lake Tahoe Basin (2010).....	3-536
Table 3-79. Comparison of overall Best Management Practices Evaluation Program Ratings .....	3-536
Table 3-80. Wilderness Indicators - Recommended Wilderness Acres and Trails by Alternative.....	3-570
Table 3-81. Wilderness lands located within the Lake Tahoe Basin Management Unit.....	3-572
Table 3-82. Impervious cover by land ownership in the Lake Tahoe Basin.....	3-593
Table 3-83. Impervious cover on National Forest System lands by Land Capability Class .....	3-594
Table 3-84. Listed 303(d) stream segments in the Lake Tahoe Basin (2010) .....	3-596

**FEIS Figures**

Figure 1-1. Vicinity map of National Forest System Lands on the LTBMU.....1-4

Figure 2-1. Proportion of Lands in each Management Area, Alternatives B, C, D, and E...2-44

Figure 3-1 Air Quality Jurisdictions for LTBMU Area.....3-35

Figure 3-2 Area designations for federal 8-hour ozone.....3-39

Figure 3-3 Area designations for state 8-hour ozone.....3-39

Figure 3-4 Areas likely to contain NOA in the Lake Tahoe Area.....3-41

Figure 3-5. Passive samplers average O3.....3-43

Figure 3-6. Passive samplers average O3.....3-44

Figure 3-7. Passive samplers average NH3.....3-47

Figure 3-8. Passive samplers average NH3.....3-48

Figure 3-9. Glide path proposed in the visibility SIP.....3-50

Figure 3-10. BLIS1 pollutant species for the best and worst 20%.....3-50

Figure 3-11. Light extinction from each pollutant on worst visibility days at BLIS1.....3-52

Figure 3-12. Light extinction from each pollutant on best visibility days at BLIS1.....3-53

Figure 3-13. Worst and best 20% visibility days.....3-54

Figure 3-14 Pollutant emissions from prescribed fire for Period 1 (tons) .....3-57

Figure 3-15. Pollutant emissions from wildfire for Period 1 (tons) .....3-58

Figure 3-16 Total pollutant emissions (prescribed and wildland) for Period 1 (tons) .....3-59

Figure 3-17. Air toxic emissions for Period 1 (tons) .....3-60

Figure 3-18. Period 1 black carbon emissions (tons).....3-61

Figure 3-19 GHG emissions for Period 1 (metric tons of CO2 equivalents).....3-62

Figure 3-20. Biomass removed in Period 1 (bone dry tons).....3-64

Figure 3-21. Pollutant emissions averted by harvest for Period 1 (tons) .....3-67

Figure 3-22. Air toxic emissions averted by harvest for Period 1 (tons of CO2 equivalents)  
.....3-68

Figure 3-23 Above-ground live biomass (bone dry tons) .....3-69

Figure 3-24 Carbon sequestration under each alternative (equivalents of CO2 in metric tons)  
.....3-70

Figure 3-25. Page from the Washoe Lands document "Lake of the Sky: Washoe Stewardship of Lake  
Tahoe".....3-197

Figure 3-26. Percent of ignitions throughout the Lake Tahoe Basin by fire management unit (FMU) and  
cause (Human vs. Natural) 1973-2010.....3-207

Figure 3-27. Number of ignitions throughout the Lake Tahoe Basin by fire management unit (FMU) and  
cause (Human vs. Natural) 1973-2010.....3-207

Figure 3-28. Fire type map based on FLAMMAP output.....3-209

Figure 3-29. Condition Class based on mean FRID (CC[FRID]) .....3-213

Figure 3-30. Wildfire acres burned in the Lake Tahoe Basin by decade (1973-2010) .....3-216

Figure 3-31. Number of human and natural ignitions 1973-2010.....3-216

Figure 3-32. Fire Causes and Acres Burned by Year.....3-217

Figure 3-33. Monthly average number of days that meet permissible burn day and burn plan prescription  
criteria.....3-218

Figure 3-34. Average lightning strike occurrence in the Lake Tahoe Basin recorded by month from 1990  
through 2009.....3-219

Figure 3-35. Average number of lightning strikes occurring from 1990 through 2010 in areas approved for  
managed wildfire by alternative.....3-219

Figure 3-36. Linear regression of lightning ignitions by lightning strikes from 1990 through  
2010.....3-220

Figure 3-37. Potential acres of managed wildfire produced using the Fire Spread Probability (FSPro)  
model.....3-222

Figure 3-38. Major Forest California Wildlife Habitat Relationships (CWHR) vegetation  
types.....3-241

Figure 3-39. Cumulative Mortality, trees per acre (TPA) across the LTBMU, 2000-2011 .....3-249

Figure 3-40. All Forested trends over time for each seral stage in Alternative A.....3-259

Figure 3-41. White fir-mixed conifer trends over time for each seral stage in Alternative A .....3-260

Figure 3-42. White fir-mixed conifer percent departure from desired conditions in Alternative A .....3-260

Figure 3-43. Jeffrey pine trends over time for each seral stage in Alternative A.....3-261

Figure 3-44. Jeffrey pine percent departure from desired conditions in Alternative A.....3-261

Figure 3-45. Red fir trends over time for each seral stage in Alternative A.....3-262

Figure 3-46. Red fir percent departure from desired conditions in Alternative A.....3-262

Figure 3-47. Net growth and removals (in 100s of cubic feet of volume) in Alternative A.....3-263

Figure 3-48. Inventory and growth of large trees greater than 30 inches in diameter in Alternative A.....3-263

Figure 3-49. All Forested trends over time for each seral stage in Alternative B.....3-265

Figure 3-50. White fir-mixed conifer trends over time for each seral stage in Alternative B .....3-265

Figure 3-51. White fir-mixed conifer percent departure from desired conditions in Alternative B .....3-266

Figure 3-52. Jeffrey pine trends over time for each seral stage in Alternative B.....3-267

Figure 3-53. Jeffrey pine percent departure from desired conditions in Alternative B.....3-267

Figure 3-54. Red fir trends over time for each seral stage in Alternative B.....3-268

Figure 3-55. Red fir percent departure from desired conditions in Alternative B.....3-268

Figure 3-56. Net growth and removals (in 100s of cubic feet of volume) in Alternative B.....3-269

Figure 3-57. Inventory and growth of large trees greater than 30 inches in diameter in Alternative B.....3-269

Figure 3-58. All Forested trends over time for each seral stage in Alternative C.....3-271

Figure 3-59. White fir-mixed conifer trends over time for each seral stage in Alternative C .....3-271

Figure 3-60. White fir-mixed conifer percent departure from desired conditions in Alternative C .....3-272

Figure 3-61. Jeffrey pine trends over time for each seral stage in Alternative C.....3-272

Figure 3-62. Jeffrey pine percent departure from desired conditions in Alternative C.....3-273

Figure 3-63. Red fir trends over time for each seral stage in Alternative C.....3-273

Figure 3-64. Red fir percent departure from desired conditions in Alternative C.....3-274

Figure 3-65. Net growth and removals (in 100s of cubic feet of volume) in Alternative C.....3-274

Figure 3-66. Inventory and growth of large trees greater than 30 inches in diameter in Alternative C.....3-275

Figure 3-67. All Forested trends over time for each seral stage in Alternative D.....3-276

Figure 3-68. White fir-mixed conifer trends over time for each seral stage in Alternative D .....3-277

Figure 3-69. White fir-mixed conifer percent departure from desired conditions in Alternative D .....3-277

Figure 3-70. Jeffrey pine trends over time for each seral stage in Alternative D.....3-278

Figure 3-71. Jeffrey pine percent departure from desired conditions in Alternative D.....3-278

Figure 3-72. Red fir trends over time for each seral stage in Alternative D.....3-279

Figure 3-73. Red fir percent departure from desired conditions in Alternative D.....3-279

Figure 3-74. Net growth and removals (in 100s of cubic feet of volume) in Alternative D.....3-280

Figure 3-75. Inventory and growth of large trees greater than 30 inches in diameter in Alternative D.....3-280

Figure 3-76. All Forested trends over time for each seral stage in Alternative E.....3-282

Figure 3-77. White fir-mixed conifer trends over time for each seral stage in Alternative E .....3-282

Figure 3-78. White fir-mixed conifer percent departure from desired conditions in Alternative E .....3-283

Figure 3-79. Jeffrey pine trends over time for each seral stage in Alternative E.....3-283

Figure 3-80. Jeffrey pine percent departure from desired conditions in Alternative E.....3-284

Figure 3-81. Red fir trends over time for each seral stage in Alternative E.....3-284

Figure 3-82. Red fir percent departure from desired conditions in Alternative E.....3-285

Figure 3-83. Net growth and removals (in 100s of cubic feet of volume) in alternative E.....3-285

Figure 3-84. Inventory and growth of large trees greater than 30 inches in diameter in Alternative E.....3-286

Figure 3-85. Map of Lake Tahoe Basin distribution and condition of 231 aquatic MIS sites for streams tributary to Lake Tahoe.....3-315

Figure 3-86. Condition scores for 231 sites sampled from 1998-2007 along 10 major tributaries of Lake Tahoe.....3-316

Figure 3-87. Map of the Sierra Nevada bioregion for MIS, comprised of ten national forests (including the LTBMU) .....3-355

Figure 3-88. LTBMU Program Funding by Fiscal Year.....3-453

Figure 3-89. Map of HUC 6 Watersheds Defined in the Lake Tahoe Basin.....3-562

Figure 3-90. HUC 7 Watersheds and Subbasins Defined in the Lake Tahoe Basin.....3-56